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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/098,668	03/15/2002	Takafumi Yanagita	02162/HG	5714

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EXAMINER

GABOR, OTILIA

ART UNIT

PAPER NUMBER

2878

DATE MAILED: 07/31/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

10/098,668

Applicant(s)

YANAGITA ET AL.

Examiner

Otilia Gabor

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2878

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 15 March 2002.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-20 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 15 March 2002 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

**Priority under 35 U.S.C. §§ 119 and 120**

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_

## DETAILED ACTION

### *Claim Rejections - 35 USC § 103*

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

3. Claims 1- 17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Yanagita et al. (U. S. Patent 6242424) and further in view of Saito et al. (U. S. Patent 4962578).

Yanagita et al. discloses a method of preparing a radiation image conversion panel used for capturing the radiation image of an object in the field of medical imaging, the method comprising the steps of:

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- forming a stimuable phosphor layer by applying onto a support a stimuable phosphor coating composition formed of a stimuable phosphor and a polymer resin
- drying the stimuable phosphor layer
- subjecting the layer to a compression treatment using a calender roll.

Regarding claim 1 Yanagita et al. discloses that the phosphor layer is subjected to compression in order to increase the fill factor, however he does not disclose any of the specifics of the compression process or the calender roll. Since he does not put any limitation as to what kind of calender roll to be used to compress the phosphor layer, one of ordinary skill in the art would have been motivated to use the resin calender roll as disclosed by Saito et al. since it provides excellent heat and pressure resistance. The calender roll of Saito et al. comprises a resin and has a surface with a "Shore" D hardness of between 75 and 97 degrees.

Regarding claims 2, 9-11 Saito fails to specify the crown as well as the surface roughness values of the calender roller, however this constitutes only a matter of design choice since it has been held that where the general conditions of a claim are disclosed in the prior art, discovering the optimum or workable ranges involves only routine skill in the art. *In re Aller*, 220 F.2d 454, 105 USPQ 233, 235 (CCPA 1955).

Regarding claims 3, 4 and 5 Yanagita discloses that the polymer resin has a glass transition temperature of not less than -50 degrees Celsius and not more than 25 degrees Celsius and that the phosphor layer support has a glass transition temperature of not less than 30 degrees Celsius and not more than 130 degrees Celsius and that the

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polymer in the resin is at least 50% of the total weight since the hardener contained in the composition is only 0.5 to 30% by weight of the resin, thus the remaining 70% is the polymer in the resin. Since the calender roll of Saito et al. has a temperature of between 60-110 degrees Celsius, the conditions of the claims that the temperature of the roll be not less than the glass transition point of the polymer resin and not more than the glass transition point of the support, as well as that the polymer resin be at least 50% of the weight % of the resin are satisfied.

Regarding claims 6-8 Saito et al. teaches that the treatment is carried out at pressures of 300 kgf/cm which is approximately 3000 N/cm and thus the pressure requirement as enumerated in the claims is also satisfied.

Regarding claims 15-17 Yanagita discloses that the stimuable phosphor can be any of the enumerated phosphors in Col.9, including the Eu added BaFI compound of line 63.

5. Claims 18-20 rejected under 35 U.S.C. 103(a) as being unpatentable over Yanagita et al. and Saito et al. and further in view of Wakamatsu et al. (U. S. Patent 6531073).

Yanagita et al. discloses that the radiation conversion panel is used to capture the image of an irradiated patient in the field of medical imaging, however he fails to disclose how the image is captured on and read from the panel. Since these conversion panels are conventionally used in the medical imaging field, one would be motivated to use the image capturing and reading method as disclosed by Wakamatsu et al., whereby the image of a patient is captured by first irradiating a patient with X-rays after

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which the radiation is stored in the conversion panel wherefrom the image is read by stimulating the stimuable layer with radiation and reading the stimulated luminescence from the phosphor layer.

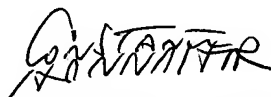
### ***Conclusion***

6. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure: Nakano et al. (U. S. Patent 5952666), Yamane (U. S. Patent 5888647), Rounsley (U. S. Patent 5237915).

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Otilia Gabor whose telephone number is 703-305-0384. The examiner can normally be reached on Monday-Friday between 8am-5pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David Porta can be reached on 703-308-4852. The fax phone numbers for the organization where this application or proceeding is assigned are 703-308-7722 for regular communications and 703-872-9319 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-0956.

  
CONSTANTINE HANNAHER  
PRIMARY EXAMINER  
GROUP ART UNIT 2878

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July 8, 2003